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EXAMINER				
ZHU, RICHARD Z				
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2625				
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

**Application No.**

10/763,707

**Applicant(s)**

TOKUDA, MASASHI

**Examiner**

RICHARD Z. ZHU

**Art Unit**

2625

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 07 July 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SF/ICE)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### **Acknowledgement**

1. Acknowledgement is made of applicant's amendment made on 07/07/2008. Applicant's submission filed has been entered and made of record.

### ***Status of the Claims***

2. Claims 1-19 are pending.

### ***Response to Applicant's Arguments***

3. The applicant argued that it is complicated to redesign a silicon digital access arrangement so much so that one of ordinary skill in the art would not be motivated to perform the modification necessary. The examiner respectfully disagrees.

In an obviousness rejection, a determination is made to resolve the level of skill in the art. In particular, a point at issue within said determination is whether or not it is within the level of skill of a hypothetical one of ordinary skill in the art to perform the modification as dictated by the office action. *Rahamim et al (US 6351530 B1)* demonstrated that it indeed is within one of ordinary skill in the art to redesign the silicon digital access arrangement in the manner dictated by the office action in at least its disclosed elements shown in Figs 1-2. The redesigning process may very well be complicated as articulated by the application. However, the level of complexity did not prevent at least the inventors of *Rahamim* from designing their silicon digital access arrangement and as such said complexity should not

prevent the hypothetical one of ordinary skill in the art to do the same, assuming the inventors of *Rahamim* are ones of ordinary skill in the art.

Furthermore, the office action does indeed acknowledge that the design process is complicated as evidenced by *D'Angelo*. However, said admission complexity does not render *Rahamim* uncombinable with the *APA* because *Rahamim* clearly demonstrated the complicated designing process is indeed within the level of skill for one of ordinary skill in the art.

***Claim Rejections - 35 USC § 112***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all written description rejections set forth in this Office action:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claims 1-19 are rejected under 35 USC 112 1st Paragraph as failing to fulfill the written description requirement.

**Regarding Claims 1, 7, and 8**, the independent claims included the newly amended limitation “a monitoring device located within the silicon data access arrangement”. Applicant’s specification on Page 9, 1<sup>st</sup> paragraph and the drawings shown in Fig 1 discloses a system side device 409 having an analog output terminal connected to a speaker 414 wherein it is repeatedly disclosed through out the specification that it is the speaker 414 that monitors the progress of communication in PTSN and ISDN lines, see for example Page 11, 2<sup>nd</sup> paragraph. Clearly, Speaker 414 is not located within the silicon digital access arrangement as shown in Fig 1. As such, there is no support within the specification for the

newly amended limitation “a monitoring device located within the silicon data access arrangement”.

All remaining claims are dependent upon the independent claims and therefore exhibit the same deficiencies as the independent claims.

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-3, 6-11, 14-16, and 19 are rejected under 35 USC 103 (a) as being unpatentable over the teachings of Applicant Admitted Prior Art (*AAPA*) in view of *Rahamim et al (US 6351530 B1)* and *Blackwell et al (US 5598401 A)*.

**Regarding Claims 1, 7, and 8, *AAPA* discloses:**

an analog interface (**Fig 4, SW1 to NCU section of Fig 5, interface with PSTN**) formed from a silicon data access arrangement (**Fig 5, Page 4, lines 5-14, “silicon data access arrangement”**) operative to interface with an analog telephone line (**Fig 5, Telephone Line 309**), said analog interface including an insulation device (**Fig 5, Insulation Condenser 310**) configured to insulate a remainder of said facsimile use modem apparatus (**Fig 5, Secondary Side comprising Controller Section, Modem DSP Section and System Side Device**) from said analog telephone line;

a digital interface (**Fig 4, ISDN Interface Section 203**) operative to interface with an ISDN or Integrated Services Digital Network line (**Fig. 4, ISDN Line 204**);

a signal converting device (**Fig 4, Codec 206 + Fig 5, Secondary Side 302. The analog interface of Fig 5 passes processed analog signal from PSTN to the codec in Fig 4 for further processing into signal use for ISDN**) configured to convert a modem signal used in facsimile communications via the analog telephone line into a signal used in the ISDN line (**Page 3, lines 11-20**) and convert a second signal from the ISDN line into a converted signal for use in facsimile communications via the analog telephone line (**Page 3, lines 21-28**).

a monitoring device (**Fig. 4, Codec 206 and Addition Amplifier 209**) configured to monitor a progress of the facsimile communications (**Page 3, lines 17-20**); said monitoring device being connected to the silicon data access arrangement (**Page 4, lines 2-4 and Page 4, line 22 – Page 5, line 7**).

a data transmitting device operative to transmit linear data to the speaker (**Fig 4, Speaker 207 and see Page 3, lines 15-20**).

However, *AAPA* does not disclose a monitoring device located within the silicon data access arrangement and configured for monitoring a progress of the facsimile communication via the ISDN line.

*Rahamim* discloses a design for digital access arrangement (**Fig 1 and see Col 4, Rows 5-18**) comprising a monitoring device located within the silicon data access arrangement and configured for monitoring a progress of the facsimile communication via an

ISDN line (Fig 2 and Col 6, Rows 20-26, within the system side circuitry 108 of the silicon DAA is a call progress monitor 134 that analyze raw signal samples for a CODEC and drives a buzzer or speaker. The applicant's specification failed to disclose any equivalent call progress monitor 134 within system side device 409).

*Rahamim* suggested that "requirement of passing analog audio signals across the high voltage isolation barrier for provision to a coder/decoder (CODEC) and other DAA circuitry hampers efforts to decrease the size and cost of the barrier due to the foregoing design constraints. Further, each signal path across the barrier adds to size and expense of the high voltage isolation barrier" (Col 3, Rows 5-10). Therefore, *Rahamim* discloses a high voltage isolation barrier or digital silicon access arrangement according to the invention provides an inexpensive and physically compact way to pass digital signals in both directions utilizing as few as one capacitor or one transformer (Col 14, Rows 32-36, see D'Angelo, Col 3, Rows 53-56 and Col 2, Rows 5-10, the function of a DAA is to act as a voltage isolation barrier between the line side device and system side device).

It would've been obvious to one of ordinary skill in the art, as aided by the instructions of *Rahamim*, to modify or design the silicon digital access arrangement of the *AAPA* in the manner of *Rahamim* to include a monitoring device within the system side circuitry of the silicon digital access arrangement in order to provide an exemplary silicon digital access arrangement that minimize the number of capacitor or transformer within said silicon digital access arrangement (*Rahamim*, Col 14, Rows 32-36).

*Blackwell* further discloses a monitoring device (Fig 4, Terminal 100 and see Col 4 Row 62 – Col 5, Row 32, a computer that receives modulated information so that the

**user can use it to make inputs at User Interface 301, Col 7, Rows 11-29) that is configured to monitor a progress of the facsimile communication via the ISDN line (Col 6, Row 55 – Col 7, Row 29, the system of *Blackwell* resembles that of the device of *AAPA* in that it allows the communication between ISDN and PSTN lines and there exist a monitoring device in the form of a computer that allows the user to review received information), said monitoring device being connected to a data access arrangement (Fig 4, Analog Interface Circuit 314 and see Col 7, 1-2 that defined the analog interface circuit as a data access arrangement).**

It would've been obvious to one ordinarily skilled in the art at the time of the invention, to modify the combined teachings with the configuration set forth in Fig 4 of *Blackwell* so as to enable the device of the combined teachings to monitor a progress of facsimile communications via the ISDN line even with a data access arrangement present whereas the motivation would've been to provide for "a single integrated data communication device to be configured and also subsequently reconfigured to provide for data communications over a variety of networks including public switched telephone networks, leased line, and digital networks including T1, E1, and ISDN" (*Blackwell*, Abstract).

**Regarding Claim 7**, the elements claimed herein are similar to Claim 1. Therefore, please refer to rejection of Claim 1 to see relevant rejection. Furthermore, the combined teachings disclose a facsimile apparatus including a facsimile use modem (*AAPA*, Fig 5 and see *Rahamim*, Fig 1).



**Regarding Claim 8**, the elements claimed herein are similar to Claim 1. Therefore, please refer to rejection of Claim 1 to see relevant rejection. Furthermore, the network connecting the facsimile having the modem, please refer to the ISDN/PTSN network as disclosed by *APAA* and *Blackwell* in the rejection of Claim 1.

**Regarding Claims 2, 10, and 15**, *APAA* teaches a facsimile use modem apparatus wherein said linear data is formed from facsimile sending data and facsimile reception data (Page 3, lines 17-20).

**Regarding Claims 3, 11 and 16**, *APAA* teaches a facsimile use modem apparatus further comprising a volume adjusting device configured to multiply each of the facsimile sending data and facsimile reception data by a prescribed gain when a volume of the speaker is adjusted (Page 3, lines 17-19. It is well known to all that speaker volume is adjusted by changing the gain of an input amplifier. See also *Rahamim*, Col 6, Rows 20-27 and Col 9, Row 35 – Col 10, Row 4).

**Regarding Claims 6, 14, and 19**, *APAA* discloses a network control unit comprising silicon data access arrangement, speaker, and ISDN interface (Fig 5 a network control unit comprising a silicon data access arrangement and in Fig 4 a Speaker 207 and ISDN Interface Section 203).

**Regarding Claim 9**, *APAA* discloses wherein said signal converting device includes a DSP section (Fig 5, Modem DSP Section 304), and said DSP section converts a facsimile transmission signal or facsimile reception signal to generate the linear data supplied to the speaker (Page 4, line 22 – Page 5, line 7. The signal from PSTN line of Fig 5 is first

processed by Modem DSP Section 304, it is then passed into the SW1 in Fig 4 where an addition amplifier 209 takes the processed signal and sends it to Speaker 207).

8. Claims 4-5, 12-13, and 17-18 are rejected under 35 USC 103 (a) as being unpatentable over the combined teachings of *APAA, Blackwell et al (US 5598401 A)* and *Rahamim et al (US 6351530 B1)*, in view of *Averbuch et al. (US 5502752 A)*.

Regarding Claims 4, 12, and 17, the combined teachings does not teach a data canceling device.

*Averbuch* teaches a PSTN/ISDN 100 (Fig. 1, PSTN/ISDN 100) coupled to a mobile network (Fig 1, MSC 105 and see Col 2, Rows 50-53), comprising a data canceling device (Fig 4, Data Buffer 400 and see Col 4, Rows 3-4) configured to cancel excessive facsimile communications data when a clock of the ISDN line is faster than that of the modem (Col 4, Rows 8-14 “an entire bit deleted” and see Fig. 8 step 812).

It would’ve been obvious to one ordinarily skilled in the art at the time of invention to adapt data buffer 400 to measure clock of ISDN line, as suggested by CLK1 of *Averbuch*, and to measure clock of modem, as suggested by CLK2 of *Averbuch*, in order to conform to the CCITT recommendation for V.110 framing, into the silicon data access arrangement based modem of the combined teachings in order to provide “an apparatus that matches clock rates between independent networks” (*Averbuch*, Col 2, Rows 9-17).

Regarding Claims 5, 13, and 18, *Averbuch* discloses that the apparatus further comprising a noise suppressing device (Fig 4, Data Buffer 400 and see Col 4, Rows 3-4) operative to suppress noises output by repeatedly using a previous data when the clock of the

ISDN line is slower than that of the modem (Col 4, Rows 14-24 “an entire bit is added...” and see Fig. 8 step 812).

The combined teachings as modified by *Averbuch* would be enabled to output a consistent signal without excessive or insufficient amount of signal into the speaker as taught by *AAPA* so that a user can aurally monitor a sufficiently consistent audio signal.

### ***Conclusion***

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to examiner Richard Z. Zhu whose telephone number is 571-270-1587 or examiner's supervisor King Y. Poon whose telephone number is 571-272-7440. Examiner Richard Zhu can normally be reached on Monday through Thursday, 7:30 - 4:00.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

RZ<sup>2</sup>  
08/25/2008

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